

COOLANT FEED DRILL NOZZLE WITH THRUST-VECTORED EXHAUST

ABSTRACT OF THE DISCLOSURE

5 **[045]** A drill nozzle includes a housing having a bristle brush ring attached. The housing of the drill nozzle may include an air intake, multiple coolant inlets, multiple coolant jets, a vacuum tube, and mounting flanges. The air intake may provide a thrust-vectored down draft into the vacuum tube. The coolant inlets may receive coolant fluid that may be expelled from the coolant jets towards a
10 drill bit. Drilling debris and coolant fluid may be contained inside the bristle brush ring preventing damage and soiling of surrounding structures and areas and may be extracted with the vacuum tube. The drill nozzle may be attached to a drill motor unit of a numerically controlled drill jig, enabling the use of such numerically controlled drill jig for drilling high quality holes effectively into non-
15 flat surfaces, for example, the leading edge extension spar of the F-18 aircraft.